

pushing the clip out of the distal end, opening the clip by an actuator having an actuator element 17, 21 acting on the clip, being movable longitudinally in the catheter tube and actuated by the operator and having a control part converting an actuating force of the actuating element into a motion opening the legs of the clip. The actuating element is detached from the clip after opening of the clip to release the clip and close the legs of the clip to apply the clip. The clip has a first kink 13 in a first area of each leg extending outwardly and increasing a distance between the legs and a second kink 15 in a second area nearer the distal end 7 of the clip than the first area, but spaced from that distal end, extending inwardly and forming a point of mutual support for the legs.

Claim 14 is directed to a device for endoscopic application of self-closing medical clips in a body of a living being comprising a catheter tube 1, an operator, an actuator and at least one clip 3. The catheter tube has a distal end placeable in a body and a proximal end placeable outside the body. The operator is at the proximal end. The actuator extends in the catheter tube from the operator to an area adjacent the distal end, has an actuating element 17, 21 movable longitudinally in the catheter tube and controlled by the operator, and has at least one control part with a distal end edge 25 on a sleeve-shaped receiving part 33. The clip is adjacent to and directly engages the distal end edge and has a part received in the actuating element and two adjacent legs 5. The legs have first kinks 13 extending outwardly and increasing a distance between the legs in first areas of the legs and second kinks 15 extending inwardly and forming a mutual support for the legs in second areas of the legs nearer to a distal leg end of the clip than the first area, but spaced from that distal end without the legs crossing one another. The legs are opened by the first kinks engaging the control part when the clip is inserted into the sleeve-like

receiving part which converts an actuating force of the actuating element into an opening motion of the legs with the second areas engaging one another.

Claim 23 covers a self-closing medical clip comprising a crosspiece, and first and second legs extending adjacent to one another from the crosspiece to distal ends thereof and biased toward one another. The first kinks in the legs extend outwardly and increases a distance between the legs in first areas of the legs. Second kinks in the legs extend inwardly and form a mutual support for the legs in second areas of the legs. The second areas are nearer the distal ends than the first areas.

By performing the method, forming the device and forming the clip in this manner, a simple and effective mechanism is provided in which the clips can be formed and then applied. The mutual support provided by the second kinks in the second areas allow the remaining portion of the legs to pivot outwardly when the first kink is compressed with the pivoting motion being initiated at the contact of the second kinks. None of the clips of the cited patents are formed or operated in this manner.

Claims 11-18, 20, 21 and 23-28 stand rejected under 35 U.S.C. §102 as being anticipated by U.S. Patent Publication No. 2002/0128667 to Kobayashi. A comparison of the cited publication and the claimed subject matter is allegedly supported by the illustrations of Fig. 1' and Fig. 2' on pages 4 and 7 of the Office Action. In Fig. 1', the first bend below the crossover of the Kobayashi clip legs is alleged to provide the claimed first kink, and the bend near the distal end is alleged to provide the claimed second kink. The distal leg end is alleged to extend inwardly and form a point of mutual support for the leg to grip onto tissue, as allegedly shown in Fig. 21D of that patent. Relative to the limitation recited, for example in claim 16, of the pull

cable extending through two adjacent holes in the rear end crosspiece connecting the clip legs, the rejection relies on the interpretation of Fig. 7C of the Kobayashi patent, along with Fig. 2' on page 7 of the Office Action. The first hole is interpreted as the center portion of ligating wire 10, and the second hole is interpreted as the recess of the outer surface of that ligating wire.

Each of the independent claims pending in this application are novel and non-obvious relative to the Kobayashi patent since the comparison of the Kobayashi clip shown in Fig. 1' of the Office Action does not satisfy the limitations of the clip recited in the claims. Specifically, the area designated as the second kink in the drawing of Fig. 1' is not spaced from the distal leg end and does not extend inwardly to form a point of mutual support for the legs. The alleged support relied upon in this rejection is only at the very distal end in the Kobayashi clip and is separated by tissue. In contrast, each claim requires that the mutual support be spaced from the distal end and provide a mutual support for the legs, not gripping the tissue.

Accordingly, claims 11, 14 and 23 are patentably distinguishable over the Kobayashi patent. None of the other cited patents supply these deficiencies in the Kobayashi patent.

Claims 12-13 and 27, claims 15-22 and 28 and claims 24-26, being dependent upon claims 11, 14 and 23, respectively, are also allowable for the above reasons. Moreover, these dependent claims recite additional features further distinguishing them over the cited patents.

Claim 12 is further distinguishable by the form of the legs, particularly the legs not crossing one another. The Kobayashi clip legs cross one another since the portion of that clip in between the alleged "first kink" and ligating wire 10 cannot be ignored as providing portions of its legs that cross one another. The entirety of the Kobayashi clip legs must be considered.

Claim 13 is further distinguishable by the additional other clips and the functional linking of the various clips.

Claim 15 is further distinguishable by the pulling element in combination with a beveled control surface on the distal end edge of the sleeve-shaped receiving part. No such beveled edge is disclosed or rendered obvious by the Kobayashi patent. Apparently the Kobayashi tightening ring 29 in Fig. 21A is cited relative to the claimed receiving part. However, that ring does not have the beveled control surface at its distal end edge, as recited in this claim. The mere allegation of the presence of a bevel without any showing thereof in the drawing and without any citation to the specification renders the rejection of claim 15 untenable.

Claim 16 is further distinguishable by the crosspiece having the two adjacent holes, with the pull cable extending through those two holes. In contrast, Fig. 7C cited relative to this feature merely shows ligating wire 10 connecting manipulating wire 9 to clip 3 and having a notch or exterior recess therein. No crosspiece with two through holes is provided through which the manipulating cable 9 extends. Relative to the Office Action Fig. 2', the ligating ring is improperly interpreted as having two holes through which the pull wire extends. The Kobayashi manipulating wire 9 clearly does not extend through the exterior recess in ligating wire 10, as required by claim 16.

Claim 17 is further distinguishable by the breaking point between the two through holes. Neither the crosspiece of the clip 3 nor wire 10 of the Kobayashi patent has the two through holes or the breaking point between those through holes. The exterior recess in Kobayashi ligating wire 10 cannot be properly interpreted to read on both a second hole and a breaking point.

Claim 18 is further distinguishable by the blocking element recited therein, particularly within the overall claimed combination.

Claim 19 is further distinguishable by the blocking element being in the form of a collet with jaws. Relative to this feature, the Kimura publication is cited. However, it does not disclose the claimed features in the overall claimed combination.

Claim 20 is further distinguishable by the multiple clips within the overall claimed combination.

Claim 21 is further distinguishable by the actuator being a tube within the overall claimed combination.

Claim 22 is further distinguishable by the axial projection on the sleeve-shaped receiving part, particularly within the overall claimed combination.

Claim 24 is further distinguishable by the legs not crossing one other.

Claim 25 is further distinguishable by the crosspiece having two holes adjacent one another with a predetermined breaking point therebetween which is not present in the Kobayashi clip, as discussed above.

Claims 26-28 are further distinguishable by the bent distal ends spaced from the second kinks. The recitations in these claims do not appear to be addressed in the Office Action. The alleged “second kinks” in the Kobayashi clips cannot be properly interpreted to be both the bent distal ends and the second kinks of these claims.

In view of the foregoing, claims 11-28 are allowable. Prompt and favorable action is solicited.

Respectfully submitted,



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